

REMARKS

Amendment

Prior to the present amendment, claims 1-23 were pending in the application. Claims 14-23 have been withdrawn from consideration and claims 1-13 have been rejected. Claims 1-4 and 5-13 are now pending.

Claims 1 and 12 have been amended to require that the color is modulated by the amount of colorless counterion incorporated in the ionically complexed colorant compound(s). Antecedent basis for this amendment is located at page 6, lines 27-28.

Claims 1 and 12 have been amended to require that the ionically complexed colorant compound(s) has a water solubility of less than 100 parts per million. Antecedent basis for this amendment is located in the specification and in originally presented claim 5, which has been cancelled in favor of this amendment.

Claims 1, 9, 10, 12 and 13 have been amended to clarify that the measurement system for evaluating ΔE^* units is the CIE $L^*A^*B^*$ color system. Antecedent basis for this amendment is located at page 4, line 27.

The term “predetermined” has been deleted from claims 1 and 12 and the term “apparent color” has been added to identify the unitary color of the ionically complexed colorant compound. Antecedent basis for this amendment is located throughout the specification, and particularly at page 4, line 10.

Claims 14-23 have been cancelled without prejudice to expedite prosecution.

It is respectfully submitted that these claim amendments do not introduce new matter.

Response to Rejections

Claims 1-13 have been rejected under 35 U.S.C. 102(b) as being anticipated or under 103(a) as obvious over Mueller et al., U.S. Patent No. 2,922,690.

The claims are directed to an ionically complexed colorant compound or compounds comprising an ionic dye component having an apparent color characteristic; a first dye counterion component having a known color characteristic that exhibits a color difference from the ionic dye component of at least about 10 ΔE* units and a colorless counterion component. The ionic dye component is ionically complexed with the first dye counterion component and colorless counterion component in a ratio to form an ionically complexed colorant compound (or compounds) exhibiting an apparent color modulated by the amount of colorless counterion incorporated in the ionically complexed colorant compound, and wherein the compound has a water solubility of less than 100 parts per million. These compounds provide unique colorant chemistries not previously known. These chemistries present advantages in formulation opportunities through the ability to use materials having unique solubility properties both prior to and after complexation. The resulting colorant preferably exhibits less migration from the composition to undesired environments, such as staining various surfaces in which the composition may come in contact. See the specification at page 3, lines 20-25.

Mueller discloses a dyestuff for dyeing fabrics that contain mixtures of fibers, wherein the fibers are not capable of all being dyed by the same dye, but rather must be dyed by different dyestuffs. Specifically, Mueller teaches that polyacrylonitrile polymers are dyed by basic (cationic) dyestuffs, and natural or certain synthetic fibers are dyed by acidic (anionic) dyestuffs. Column 1, lines 53-56. No single conventional dyestuff can completely dye a fabric containing both types of materials. To solve this problem, Mueller formulates a colorant that is a combination of both cationic and anionic dyes that are dispersed for application in an aqueous dyebath (see the examples). The fabric is treated in this dyebath, and the dyestuff salts dissociate so the cationic dye component can associate with the polyacrylonitrile polymers and the anionic dye component can associate with the natural or certain synthetic fibers. See column 3, lines 46-50. When the dyes are selected to have different colors, this difference is intended to provide a “shot effect” in the fabrics to be dyed. See column 2, line 46. A shot effect is defined, for example, in the Holland and Sherry textile guide (copy enclosed) as a fabric woven in contrasting colors of warp and weft which are about equal on the surface, so that the cloth appears to be one color from one point of view and the other color from another point of view. See <http://www.hollandandsherry.com/textileguide/fabrics.html>

Because the ionic dyes dissociate for this reaction with the respective fibers in aqueous dye baths, the dyestuff as described fails to meet or suggest the claims as presently amended, which require that the compounds have a water solubility of less than 100 parts per million. Further, because the Mueller dyestuffs are designed to dissociate, the respective dye components and colorless counterion component are not ionically complexed with each other in a ratio to form an ionically complexed colorant compound exhibiting an apparent color, as required in the present claims. The skilled artisan would not have been motivated to provide the components in a mixture to exhibit a color from that mixture, because to do so would frustrate a major function of the dyestuff of Mueller, namely to dissociate in order react with fibers of different chemistries to provide a shot effect.

Claims 1, 5-8, and 12 have been rejected under 35 U.S.C. 102(b) as being anticipated by Chechak, GB 1,343,709.

Chechak describes a pigment formed by reaction of an acidic dye with a basic dye. Dyes of different colors are reacted to form a pigment having a shifted color. Neutrals are produced by reacting dyes of “less pure color.” See page 2, lines 48-64. After formation of the pigment having a color that is the product of the two dyes, the pigment is treated with an acid mordant to enhance light stability and resistance to leaching. See page 3, lines 1-14. Thus, the acid mordant is provided to the pigment only after the color of the pigment has been established, and the mordant does not contribute to the apparent color of the pigment through modulation by the amount of colorless counterion incorporated in the pigment as required in the present claims. Chechak therefore clearly fails to provide an element of the present claim, and does not anticipate the claims as amended.

Claim Rejections – 35 USC § 112

Claims 1-13 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "about 10 ΔE^* units" has been objected to as being indefinite as not including the measuring system used for evaluation in the claims. The relevant claims have been amended to clarify that the measurement system for evaluating ΔE^* units is the CIE $L^*A^*B^*$ color system.

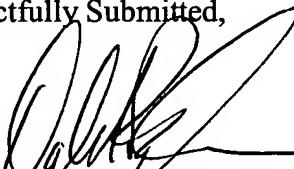
The term "predetermined" has been objected to as rendering the claims indefinite. This term has been deleted from relevant claims. It is respectfully submitted that recitation of the term "predetermined" is not necessary in the context of the currently pending compound claims.

Conclusion

In view of the above amendments and remarks, it is respectfully submitted that the present application is now in condition for allowance. Early favorable consideration and passage of the above application to issue is earnestly solicited. In the event that a phone conference between the Examiner and the Applicant's undersigned attorney would help resolve any issues in the application, the Examiner is invited to contact said attorney at (651) 275-9811.

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Respectfully Submitted,

By: 
Dale A. Bjorkman, Reg. No. 33,084
Customer No. 33072
Phone: 651-275-9811
Facsimile: 651-351-2954